

CLAIM AMENDMENTS

Please cancel claims 8, 12, 20, 21, 23, 24 without prejudice or disclaimer.

Please add new claims 29 and 30.

1. (Currently Amended) An isolated polypeptide ~~comprising an amino acid sequence~~ selected from the group consisting of:

- a) a polypeptide comprising an amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:1-2,
- b) a polypeptide comprising a naturally occurring amino acid sequence having at least 90% sequence identity to ~~an~~ the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:1-2, and
- c) a biologically active fragment of a polypeptide comprising an the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:1-2, and
- d) ~~an immunogenic fragment of an amino acid sequence selected from the group consisting of~~ SEQ ID NO:1-2.

2. (Currently Amended) An isolated polypeptide of claim 1 ~~selected from the group consisting~~ comprising an amino acid sequence of SEQ ID NO:1-2.

3. (Original) An isolated polynucleotide encoding a polypeptide of claim 1.

4. (Original) An isolated polynucleotide encoding a polypeptide of claim 2.

5. (Currently Amended) An isolated polynucleotide of claim 4 comprising the sequence ~~selected from the group consisting of~~ SEQ ID NO:3[[-4]].

6. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.

7. (Original) A cell transformed with a recombinant polynucleotide of claim 6.

8. (Canceled)

9. (Original) A method for producing a polypeptide of claim 1, the method comprising:

- a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and
- b) recovering the polypeptide so expressed.

10. (Original) An isolated antibody which specifically binds to a polypeptide of claim 1.

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11. (Currently Amended) An isolated polynucleotide ~~comprising a polynucleotide sequence~~ selected from the group consisting of:

- a) a polynucleotide comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:3[[-4]],
- b) a polynucleotide comprising a naturally occurring polynucleotide sequence having at least 70% sequence identity to a the polynucleotide sequence selected from the group consisting of SEQ ID NO:3[[-4]],
- c) a polynucleotide ~~sequence~~ complementary to a polynucleotide of a),
- d) a polynucleotide ~~sequence~~ complementary to a polynucleotide of b), and
- e) an RNA equivalent of a)-d).

12. (Canceled)

13. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
- b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

14. (Original) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.

15. (Original) A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:

- a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
- b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

16. (Currently Amended) A ~~pharmaceutical~~ composition comprising an effective amount of a polypeptide of claim 1 and a pharmaceutically acceptable excipient.

17. (Currently Amended) A ~~pharmaceutical~~ composition of claim 16, wherein the polypeptide comprises ~~an~~ the amino acid sequence ~~selected from the group consisting of~~ SEQ ID NO:1-2.

18. (Currently Amended) A method for treating a disease or condition associated with decreased expression of functional DETX, comprising administering to a patient in need of such treatment the ~~pharmaceutical~~ composition of claim 16.

19. (Original) A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting agonist activity in the sample.

20. (canceled)

21. (canceled)

22. (Original) A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

- a) exposing a sample comprising a polypeptide of claim 1 to a compound, and
- b) detecting antagonist activity in the sample.

23. (Original) A pharmaceutical composition comprising an antagonist compound identified by a method of claim 22 and a pharmaceutically acceptable excipient.

24. (Original) A method for treating a disease or condition associated with overexpression of functional DETX, comprising administering to a patient in need of such treatment a pharmaceutical composition of claim 23.

25. (Original) A method of screening for a compound that specifically binds to the polypeptide of claim 1, said method comprising the steps of:

- a) combining the polypeptide of claim 1 with at least one test compound under suitable conditions, and
- b) detecting binding of the polypeptide of claim 1 to the test compound, thereby identifying a compound that specifically binds to the polypeptide of claim 1.

26. (Original) A method of screening for a compound that modulates the activity of the polypeptide of claim 1, said method comprising:

- a) combining the polypeptide of claim 1 with at least one test compound under conditions permissive for the activity of the polypeptide of claim 1,
- b) assessing the activity of the polypeptide of claim 1 in the presence of the test compound, and
- c) comparing the activity of the polypeptide of claim 1 in the presence of the test compound with the activity of the polypeptide of claim 1 in the absence of the test compound, wherein a change in the activity of the polypeptide of claim 1 in the presence of the test compound is indicative of a compound that modulates the activity of the polypeptide of claim 1.

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27. (Original) A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:

- a) exposing a sample comprising the target polynucleotide to a compound, and
- b) detecting altered expression of the target polynucleotide.

28. (Original) A method for assessing toxicity of a test compound, said method comprising:

- a) treating a biological sample containing nucleic acids with the test compound;
- b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof;
- c) quantifying the amount of hybridization complex; and
- d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

29. (New) A microarray wherein at least one element of the microarray is a polynucleotide of claim 11.

30. (New) A method of generating an expression profile of a sample which contains polynucleotides, the method comprising:

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Amended
- a) labeling the polynucleotides of the sample,
 - b) contacting the elements of the microarray of claim 29 with the labeled polynucleotides of the sample under conditions suitable for the formation of a hybridization complex, and
 - c) quantifying the expression of the polynucleotides in the sample.
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